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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,071	08/09/2006	Hideo Watanabe	NGB-141-A	6591

21828 7590 03/27/2008  
CARRIER BLACKMAN AND ASSOCIATES  
24101 NOVI ROAD  
SUITE 100  
NOVI, MI 48375

EXAMINER
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STERLING, AMY JO

ART UNIT	PAPER NUMBER
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3632

NOTIFICATION DATE	DELIVERY MODE
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03/27/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

cbalaw@gmail.com  
cbalaw@ameritech.net  
wblackman@ameritech.net

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/589,071	WATANABE ET AL.	
	Examiner	Art Unit	
	AMY J. STERLING	3632	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/9/06</u> .  | 6) <input type="checkbox"/> Other: _____.                         |

### **DETAILED ACTION**

This is the first Office Action for application number 10/589,071 On-Board Gaseous Fuel Tank Module, filed on 8/9/06. Claims 1 and 2 are pending.

### ***Information Disclosure Statement***

The information disclosure statement submitted on 8/9/06 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5869746 to Watanabe et al. and in view of United States Patent Publication No. 2006/0096993 to Takashima.

Watanabe et al. discloses applicant's basic inventive concept, including teaching a tank (6) having a support frame member (9) and a gaseous fuel tank (6)

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fixed to the support member horizontally wherein the tank has a cylindrical complete unit and a gaseous fuel inlet and outlet valve device (14) provided at an axial end portion of the tank complete unit such that a part thereof protrudes outwardly from the tank complete unit.

Watanabe et al. does not disclose the a pin hole provided in the other axial end portion of the tank complete unit so as to open outwardly; and an axis of the tank complete unit, an axis of the part of the valve device and a center line of the pin hole are disposed on a single straight line so that the part of the valve device and the pin hole are used to position the gaseous fuel tank horizontally.

Takashima discloses a tank with aligned openings (14a) positioned on either end of a cylindrical tank, the openings having their centerlines on a straight line, one opening which could be used for an inlet/outlet valve and the other opening which could be used as a pin hole, the tank openings positioned in axial alignment so that the tank may be use defectively in a horizontal manner (See Figure 4). Therefore it would have been obvious to one of ordinary skill in the art from the teachings of Takashima to use a tank with aligned openings in order to use the tank horizontally.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5869746 to Watanabe et al. and in view of United States Patent Publication No. 2006/0096993 to Takashima as applied to claim 1 above and further in view of United States Patent No. 3362534 to Kay.

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Watanabe et al. discloses the basic inventive concept with the exception that it does not teach that the cylindrical tank complete unit comprises an inner shell unit, and an outer shell of an FRP which covers the inner shell unit.

Takashima teaches a cylindrical tank that has comprises an inner shell unit, and an outer shell of an FRP (See paragraph 0004) which covers the inner shell unit, inner and outer layers used so that the tank does not leak and the material used because of its strength yet lightweight properties. Therefore it would have been obvious to one of ordinary skill in the art from the teachings of Takashima to have used this material in order to have a tank strong, lightweight and leak proof tank.

Watanabe et al. and Takashima do not teach the pin hole is defined by a pin hole formed body the pin hole formed body is embedded in the outer shell unit and comprises a cylindrical body in which the pin hole is opened in an end face thereof and a mounting flange residing at the other end of the cylindrical body and joined to the inner shell unit; and the opened end face of the cylindrical body is made either to be flush with or to sink from an outer surface of the outer shell unit.

Kay teaches a cylindrical tank with a pin hole (69) mounted on an axial end of the tank, the pin hole being defined by a pin hole formed body (65) the pin hole formed body is embedded in the outer shell unit (45) and comprises a cylindrical body in which the pin hole is opened in an end face thereof and a mounting flange (43) residing at the other end of the cylindrical body and joined to the inner shell unit (55); and the opened end face of the cylindrical body is made either to be flush with or to sink from an outer surface of the outer shell unit, the configuration used so that the pin hole is protectively

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mounted to the cylinder. Therefore it would have been obvious to one of ordinary skill in the art from the teachings of Kay to used this pin hole configuration so that the pin hole is protectively mounted to the cylinder.

### ***Conclusion***

Any inquiry concerning this communication should be directed to Amy J. Sterling at telephone number 571-272-6823. The examiner can normally be reached (Mon-Fri 8am-5:00pm). The fax machine number for the Technology center is 571-273-8300 (formal amendments), informal amendments or communications 571-273-6823. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist at 571-272-3600.

/Amy J. Sterling/  
Primary Examiner, Art Unit 3632  
3/28/08